REMARKS

Claims 1, 21, and 22 have been amended. Claims 16 and 23 have been cancelled without disclaimer of the subject matter contained therein or prejudice to Applicants' right to file continuing applications directed thereto. Support for the amendments to claim 1, 21, and 22 may be found throughout the specification. No new matter has been added. Upon entry of this Amendment, claims 1-15, 17, 18, 21, 22, and 24 remain pending.

In the Office Action dated June 6, 2006, claims 1, 5, 11, 16-18, and 22-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahashi (U.S. Patent No. 5,610,683) in view of Hwang et al. (U.S. Patent No. 6,185,085). Applicants respectfully traverse this rejection.

Independent claim 1 recites a lithographic apparatus that includes "an illumination system constructed and arranged to provide a beam of radiation; an article support constructed and arranged to support a flat article in a beam path of the beam of radiation; and an article handler provided in the article support, the article handler being constructed and arranged to move said article during placement of said article on, or removal of said article from said article support, said article handler comprising an electrode and a dielectric layer in order to form an electrostatic clamp to electrostatically clamp said article." The combination of Takahashi and Hwang et al. does not disclose or suggest all of the features of claim 1.

Takahashi teaches the use of an immersion type projection apparatus in which various cassette conveying devices (11-1 – 11-4) are used to handle cassettes between a cassette stock (10) and a wafer chuck (12). *See* Takahashi at col. 4, ln. 55 – col. 5, ln. 35; FIG. 1. Each cassette includes an optical element on a top side, a wafer on a bottom side, and liquid in between the optical element and wafer. *See* Takahashi at col. 5, lns. 6-20; FIG. 2. Takahashi also teaches the use of various mechanical hands for handling the cassettes during different stages of processing. *See* Takahashi at col. 5, ln. 63 – col. 6, ln. 21. Takahashi does not disclose or suggest that any of the cassette conveying devices have an electrode and a dielectric layer in order to form an electrostatic clamp to electrostatically clamp the cassette to the respective hand. In addition, Takahashi does not disclose or suggest that any of the cassette conveying devices are provided in the wafer chuck or any part of the wafer stage (13, 14).

Hwang et al. teaches the use of an electrostatic arm to transport a semiconductor wafer between a staging area and a processing chamber. *See* Hwang et al. at abstract. Hwang et al. does not disclose or suggest that the arm may be provided in an article support

that is constructed and arranged to support a flat article in a beam path of a beam of radiation provided by an illumination system. Accordingly, even if the electrostatic arm of Hwang et al. was provided in the apparatus of Takahashi, which Applicants in no way concede would be proper, all of the features of claim 1 are not disclosed or suggested by the combination of Takahashi in view of Hwang et al.

Accordingly, Applicants respectfully submit that claim 1 and the claims that depend from claim 1 are patentable over Takahashi in view of Hwang et al., and respectfully request that the rejection to claims 1, 5, 11, 17, and 18 be withdrawn.

Independent claim 22 recites a lithographic apparatus that includes "an illumination system that provides a beam of radiation to an article; a support that supports the article in the beam of radiation; an article handler configured to move the article during placement of the article on, and removal of the article from, the support, the article handler being integrated with the support; and an electrostatic clamp configured to clamp the article to the article handler, the electrostatic clamp comprising an electrode and a dielectric layer." The combination of Takahashi and Hwang et al. does not disclose or suggest all of the features of claim 22.

Takahashi and Hwang et al. are discussed above. Neither Takahashi nor Hwang et al. nor the combination thereof disclose or even remotely suggest a lithographic apparatus having an article handler integrated with a support that supports the article in a beam of radiation.

Accordingly, Applicants respectfully submit that claim 22 and the claim that depends from claim 22 are patentable over Takahashi in view of Hwang et al., and respectfully request that the rejection to claim 22 and claim 24 be withdrawn.

In the Office Action, claims 4 and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahashi in view of Hwang et al. in view of Blake et al. (U.S. Patent No. 5,436,790). Applicants respectfully traverse this rejection.

Claim 4 depends from claim 1 and adds the feature of "a presence detector to detect a presence of said article through a measured capacity formed by said electrode, said dielectric layer, and said article to be handled."

As discussed above, claim 1 and the claims that depend from claim 1 are patentable over Takahashi in view of Hwang et al., because the combination of Takahashi and Hwang et al. does not disclose or suggest all of the features of claim 1. Blake et al. teaches the use of an electrostatic clamp to clamp a silicon wafer to a wafer support in an ion implantation

device. *See* Blake et al. at col. 1, lns. 31-43; col. 4, lns. 51-66. Blake et al. does not even disclose an article handler to move the article during placement of the article on, or removal of the article from the article support, as recited by claim 1, and hence claim 4. Moreover, Blake et al. does not disclose or remotely suggest that the wafer support disclosed therein may be modified for use as an article handler. As such, Applicants respectfully submit that claim 4 is patentable over Takahashi in view of Hwang et al. in view of Blake et al., and respectfully request that the rejection to claim 4 be withdrawn.

Independent claim 21 recites a device manufacturing method that includes, *inter alia*, handling a substrate with an article handler provided in an article support, the article handler having an electrostatic clamp, detecting a presence of the substrate on the article support by detecting a capacity formed by the electrostatic clamp and the substrate, and projecting, after detecting the presence of the substrate, the patterned beam of radiation onto a target portion of the substrate.

Takahashi, Hwang et al., and Blake et al. are discussed above. The combination of Takahashi, Hwang et al., and Blake et al. does not disclose or suggest a device manufacturing method that includes, *inter alia*, handling a substrate with an article handler provided in an article support. As such, Applicants respectfully submit that claim 21 is patentable over Takahashi in view of Hwang et al. in view of Blake et al., and respectfully request that the rejection to claim 21 be withdrawn.

In the Office Action, claims 2, 3, 6-10, and 12-15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takahashi in view of Hwang et al. in view of Kitabayashi et al. (U.S. Patent No. 5,530,616). Applicants respectfully traverse this rejection.

Claims 2, 3, 6-10, and 12-15 depend from claim 1 and recite additional features of the lithographic apparatus. As discussed above, claim 1 is patentable over Takahashi in view of Hwang et al. The combination of Takahashi et al., Hwang et al., and Kitabayashi et al. does not disclose or suggest all of the features of claim 1 and dependent claims 2, 3, 6-10, and 2-15.

Takahashi et al. and Hwang et al. are discussed above. Kitabayashi et al. discloses the use of an electrostatic chuck to clamp a wafer in a low pressure environment. *See* Kitabayashi et al. at col. 1, ln. 5 – col. 2, ln. 56. Kitabayashi et al. does not even disclose an article handler constructed and arranged to move said article during placement of said article on, or removal of said article from said article support, as recited by claim 1, and hence claims 2, 3, 6-10, and 12-15. Moreover, Kitabayashi et al. does not disclose or remotely

suggest that the chuck disclosed therein may be modified for use as an article handler provided in an article support that is constructed and arranged to support a flat article in a beam path of the beam of radiation.

As such, Applicants respectfully submit that claim 1 and the claims that depend from claim 1 are patentable over Takahashi in view of Hwang et al. in view of Kitabayashi et al., and respectfully request that the rejection to claims 2, 3, 6-10, and 12-15, which depend from claim 1, be withdrawn.

All rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited. If any point remains at issue which the Examiner feels may best be resolved through a personal or telephone interview, please contact the undersigned at the telephone number below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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